

§ 64.49

valves. In addition, a rupture disc may be attached.

(b) An MPT with an internal capacity of 550 U.S. gallons or less must have a rupture disc or a spring loaded relief valve.

§ 64.49 Labeling openings.

Each opening of a tank must be labeled to identify the function such as "suction", "discharge", "heating coil".

§ 64.51 Tank parts marking.

Any part of a tank furnished by an outside supplier may not be used in a tank unless it bears—

- (a) The Coast Guard symbol;
- (b) The Marine Inspection Office identification letters;
- (c) The word "part";
- (d) The manufacturer's name and serial number; and
- (e) The design pressure.

§ 64.53 Information plate for MPTs.

(a) A corrosion-resistant metal plate containing the information in paragraph (b) of this section must be permanently attached to each MPT.

(b) Each information plate required in paragraph (a) of this section must bear the following information in legible letters 3/16 inch or more in height:

- (1) Owner's name.
- (2) Manufacturer's name.
- (3) Date of manufacture.
- (4) Serial number of tank.
- (5) Maximum allowable working pressure in psig.
- (6) Test pressure in psig.
- (7) External-pressure rating in psig.
- (8) Total capacity in gallons.
- (9) Maximum net weight in long tons.
- (10) Maximum gross weight in long tons.
- (11) Percent ullage at 122 °F.
- (12) Date of hydrostatic test.

[CGD 84-043, 55 FR 37410, Sept. 11, 1990]

§ 64.55 Relief device location.

A pressure relief device must be located on an MPT in a place that—

- (a) Is the highest practical point of the tank; and
- (b) Allows direct communication with the vapor space.

Subpart C—Pressure Relief Devices and Vacuum Relief Devices for MPTs

§ 64.57 Acceptance of pressure relief devices.

A pressure relief device for an MPT must be—

- (a) From a supplier² accepted under Chapter I of Title 46, Code of Federal Regulations; or
- (b) Accepted by the Coast Guard in accordance with the procedures in § 50.25-10 of this chapter.

[CGD 84-043, 55 FR 37410, Sept. 11, 1990]

§ 64.59 Spring loaded pressure relief valve.

A spring loaded pressure relief valve must—

- (a) Be set at a nominal pressure of 125 percent of the maximum allowable working pressure;
- (b) Have a minimum normal venting capacity that is sufficient to prevent the tank pressure from exceeding 137.5 percent of the maximum allowable working pressure;
- (c) Close after discharge of a pressure not lower than 115 percent of the maximum allowable working pressure; and
- (d) If closed, remain closed at any pressure less than 115 percent of the maximum allowable working pressure.

§ 64.61 Rupture disc.

If a rupture disc is the only pressure relief device on the tank, the rupture disc must—

- (a) Rupture at a pressure of 125 percent of the maximum allowable working pressure; and
- (b) Have a minimum normal venting capacity that is sufficient to prevent the tank pressure from exceeding 137.5 percent of the maximum allowable working pressure.

§ 64.63 Minimum emergency venting capacity.

(a) The total emergency venting capacity (*Q*) of the relief devices of an

²Accepted suppliers are listed in CG-190, *Equipment list*.

uninsulated MPT must be in accordance with Table 1 or the following formula based upon the pressure relief device operating at a pressure not to exceed the test pressure:

$$Q = 633,000 \left(\frac{A^{0.82}}{LC} \right) \sqrt{\frac{ZT}{M}}$$

where:

Q=Minimum required rate of discharge in cubic feet per minute of free air at standard conditions (60 °F and 14.7 psia).

M=Molecular weight of the product, or 86.7.

T=Temperature, degrees Rankine (460° + temperature in degrees F of gas at relieving temperature), or 710° Rankine.

A=Total external surface area of the tank compartment in square feet.

L=Latent heat of the product being vaporized at relieving conditions in Btu per pound, or 144 Btu per pound.

Z=Compressibility factor of the gas at relieving conditions, or 1.0.

C=Constant based on relation of specific heats, in accordance with Appendix J of Division 1 of Section VIII of the ASME Code, 1974 edition, or 315.

(b) The total emergency venting capacity (Q) of an insulated portable tank may have a reduction if—

(1) It is shown to the Coast Guard that the insulation reduces the heat transmission to the tank;

(2) The present reduction of the emergency venting capacity (Q) is limited to the percent reduction of the heat transmission to the tank or 50 percent, whichever is less; and

(3) The insulation is sheathed.

TABLE 1—MINIMUM EMERGENCY VENTING CAPACITY IN CUBIC FEET: FREE AIR/HOUR (14.7 LB/IN²A AND 60 °F)

Exposed area square feet ¹	Cubic feet free air per hour	Exposed area square feet ¹	Cubic feet free air per hour
20	27,600	275	237,000
30	38,500	300	256,000
40	48,600	350	289,500
50	58,600	400	322,100
60	67,700	450	355,900
70	77,000	500	391,000
80	85,500	550	417,500
90	94,800	600	450,000
100	104,000	650	479,000
120	121,000	700	512,000
140	136,200	750	540,000
160	152,100	800	569,000
180	168,200	850	597,000
200	184,000	900	621,000
225	199,000	950	656,000

TABLE 1—MINIMUM EMERGENCY VENTING CAPACITY IN CUBIC FEET: FREE AIR/HOUR (14.7 LB/IN²A AND 60 °F)—Continued

Exposed area square feet ¹	Cubic feet free air per hour	Exposed area square feet ¹	Cubic feet free air per hour
250	219,500	1,000	685,000

¹ Interpolate for intermediate sizes.

[CGD 73-172, 39 FR 22950, June 25, 1974, as amended by CGD 84-043, 55 FR 37410, Sept. 11, 1990; 55 FR 47477, Nov. 14, 1990]

§ 64.65 Vacuum relief device.

(a) Each MPT that is designed for an external pressure of less than 7.5 psig must have a vacuum relief device.

(b) A vacuum relief device for an MPT must—

(1) Open at an external pressure of not less than 3 psig; and

(2) Have an opening with a cross-section of 0.44 square inch or more.

[CGD 84-043, 55 FR 37410, Sept. 11, 1990]

§ 64.67 Shutoff valve.

A shutoff valve may not be located—

(a) Between the tank opening and pressure relief device; or

(b) On the discharge side of the pressure relief device.

§ 64.69 Location of the pressure relief device.

A pressure relief device must be—

(a) Accessible for inspection and repair before stowage of the tank; and

(b) Attached so that escaping gas does not impinge on the tank or framework.

§ 64.71 Marking of pressure relief devices.

A pressure relief device must be plainly and permanently marked with the—

(a) Set pressure rating;

(b) Rated flow capacity expressed as cubic feet of standard air (60 °F 14.7 psia) per minute and the pressure at which the flow capacity is determined;

(c) Manufacturer's name and identifying number; and

(d) Pipe size of inlet.

Subpart D [Reserved]